

15. (Once Amended) An electronic device according to claim 3,
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[characterized in that] wherein said connection means for removable attachment of said pins to said silicon die is [are] a double-sided adhesive tape or a glue.

16. (Once Amended) An electronic device according to claim 7,
[characterized in that] wherein said connection pins are distributed on all four side edges of the die.

REMARKS

Reconsideration is respectfully requested of the above-identified application and the Office Action dated July 5, 2000.

The drawings are objected to under 37 CFR 1.83(a) as failing to show every feature of the invention specified in the claims. Applicants have amended Figs. 11 and 12, where appropriate, and these amendments are believed to overcome the objection. These drawing amendments do not introduce any new matter from the standpoint that the added reference numbers are evident from the other figures and the illustrated relationship between the circuit board and die would have been readily apparent from the original disclosure. Accordingly, it can be said that the Applicant was in possession of all illustrated features at the time of original filing (e.g., see the disclosure in lines 21-27 of page 7 and the paragraph bridging pages 8 and 9).

Claims 2, 4, 5, 8-11, 15 and 16 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has amended the claims, where appropriate, giving full consideration to the Examiner's remarks.

With regard to claims 4 and 16, the Examiner asserts that "said connection means for removable attachment of said pins" lacks sufficient literal antecedent basis. Applicant respectfully submits that claim 16 does not recite the cited language. However, Applicant has reviewed both claim 4 and claim 15 in view of the Examiner's remarks, and has amended claim 1 to provide sufficient antecedent basis for the cited language.

The Examiner objects to claim 9, asserting that the term "micrometric" is unclear because the definition of the term is not recognized in the art, and it is not otherwise clearly defined in the disclosure. Applicant submits that "micrometric" is the English language translation of the Italian word "micrometrico," which means "extremely thin," or it is used to indicate a size of the micron order magnitude. However, the matter has been rendered moot by the removal of the term in amended claim 9.

With these amendments, Applicant believes that the 35 U.S.C. §112 rejections are non-applicable to the present set of claims.

Claims 1, 3, and 7 are rejected under 35 U.S.C. §102(a) as being anticipated by Sato, or in the alternative, under 35 U.S.C. §103(a) as being obvious over Sato in view of Applicant's admitted prior art. Applicants respectfully submits that neither Sato nor Applicant's admitted prior art, teaches or suggests all of the features of independent claim 1, as amended.

One problem that is encountered in mounting a die on a printed circuit board results from the differences between the heat expansion of the die and the printed circuit board. Solving this problem has proven to be very expensive and is accomplished only by use of complex measures. The present invention solves this problem by use of pre-formed connection pins. The connection pins are pre-formed so as to accommodate for the heat expansion differences between the die and the printed circuit board. This

feature is recited in dependent claim 5 (now canceled), and claim 1 has been amended to recite the subject matter of claim 5. As such, amended claim 1 recites an electronic device, "said electronic device being unpackaged or partially packaged in a resin, wherein each of said connection pins includes a pre-formed portion which is not encapsulated in said resin, in order to accommodate the thermal expansion difference between the silicon die and the printed circuit board on which said electron device is mounted." Figures 7a, 7b, 10 11 and 12 of the present invention illustrate a few examples of pre-formed portions not encapsulated by the resin, which because of this arrangement are free to accommodate thermal expansion differences. Neither Sato nor Applicant's admitted prior art teaches or suggests this feature. Accordingly, claims 1, 3 and 7 are respectfully submitted to be allowable.

Dependent claims 6, 8-11, 15 and 16 are rejected under 35 U.S.C. §103(a) as being obvious over Sato in view of Applicant's admitted prior art, and further in view of McShane. As discussed above with regard to the anticipation rejection, neither Sato nor Applicant's admitted prior art teaches or suggests all of the features of independent claim 1. Specifically, neither Sato nor Applicant's admitted prior art teaches or suggests pre-formed connection pins as claimed. Furthermore, McShane does not teach or suggest this feature. Accordingly, there is no *prima facie* obviousness, and claims 6, 8-11, 15 and 16 should be allowable.

Claims 1, 2 and 4 are rejected under 35 U.S.C. §103(a) as being obvious over Cha. However, Applicant respectfully submits that claims 1, 2 and 4 are not obvious because there is no *prima facie* obviousness. As discussed above, independent claim 1 recites the features of canceled claim 5. That is to say, claim 1, as amended, recites pre-formed connection pins. Cha neither teaches nor suggests this feature. Accordingly, claims 1, 2 and 4 are not obvious, and claims 1, 2 and 4 should be allowable.

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In view of the above amendments and Remarks, Applicant respectfully submits that all of the claims are allowable, and that this application is therefore in condition for allowance. Favorable action is courteously requested at the Examiner's earliest convenience.

Respectfully submitted,

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